UC 149-2

UNION CARBIDE

INTERNAL CORRESPONDENCE

File

OIP

LINDE DIVISION

To (Name) R. L. Baker
Division L. E. Barron
Location R. L. Doan
V. P. Hayes
J. D. Secor
E. W. VanDenAmeele

cc: R. J. Conkling

Date May 13, 1981

Originating Dept SAFETY HEALTH AND ENVIRONMENTAL AFFAIRS
OLD SAW MILL RIVER RD TARRYTOWN N Y 1059

Answering letter date

Subject Special Linde Task Force Report

On Thursday, April 30, 1981, a meeting of the Special Linde Task Force was held in New York chaired by Mr. R. J. Conkling.

In attendance were Messrs. R. L. Doan, V. P. Hayes, E. W. VanDenAmeele, J. D. Secor and R. W. Degenhart. Dr. S. D. Austin and Mr. R. G. Hanlon also attended portions of the meeting.

Mr. Secor has written a memorandum (copy attached) summarizing actions taken and conclusions reached on the six commitments made regarding the radioactivity issue at Tonawanda. Mr. Secor's memo covers very well virtually all the subjects discussed at the meeting. The comments below refer only to topics not addressed in his memo.

Mr. Doan continues to pursue the obtaining of employee records from the government for those employees who worked on the Manhattan Project at Tonawanda. These records are needed to identify in which department and which job classification a particular employee worked, for how long, employee's age, etc. This information is essential to our mortality study.

The possibility of obtaining reimbursement from the government for some or all of the work involved in the various undertakings at Tonawanda connected with the Manhattan Project was discussed. Mr. Doan is pursuing the subject of financial assistance from the government for clean-up costs of those areas recommended for action by the Department of Energy. Legislation is needed before government funding becomes a reality. Mr. Doan feels, at best, the possibilities of the government paying for the mortality study or other parts of our program are very questionable.

I agreed to contact Mr. R. J. Klotzbach at the Niagara Falls Metals Plant to inquire whether Niagara intends to notify employees who worked on the Manhattan Project at Niagara Falls they may have been exposed to radioactive materials. Mr. Klotzbach advises Niagara has no plans to do so at present.

R. W. Degenhart (cm)

R. W. Degenhart

RWD/mob
Attachment
bcc Dr. S Austin
R. G. Hanlon

UC 1492

UNION CARBIDE

INTERNAL CORRESPONDENCE

LINDE DIVISION

270 PARK AVENUE NEW YORK NEW YORK 100

To (Name) Ms. S. D. Austin
Division Mr. L. J Berolatti
Location Mr R W. Degenhart
Floor Number Mr. R. L. Doan
Mr. V. P. Hayes
Copy to Mr. E. W Van den Ameele

cc. Mr. R. J. Conkling

Date May 12, 1981

Originating Dept Communications

Floor Number 5

Answering letter date

Subject Progress Report: Special Linde Task Force

Here is a copy of the completed Progress Report. As we agreed earlier, this will be used as the response to answer queries from the press.

J. D. Secor

JDS:cmv
Att.

TO: R. D. Kennedy

DATE: May 12, 1981

FROM: R. J. Conkling

SUBJECT: Special Linde Task Force Report

cc: R. L. Baker
J. R. Clark
J. R. MacLean

This memo summarizes the progress made and conclusions reached to date by the Special Linde Task Force with respect to the 6-point program we announced to the public following the release of the January 29, 1981 report to the New York State Assemoly Task Force on Toxic Substances.

1. Work with the Department of Energy to have the wells further examined.

Actions:

a. As reported earlier, two wells were drilled adjacent to original wastewater wells used in conjunction with the Manhattan Project. Drilling was completed during the first week in March. Both wells are 150 feet deep, the approximate depth of the original wastewater wells.

b. Soil and rock samples were taken at 10-foot intervals during the drilling and water samples were taken at four levels starting at 85 feet down to 150 feet. At the direction of the Department of Energy, the soil samples were sent to Oak Ridge Associated Universities and the solids from the water samples were sent to Argonne National Laboratories for independent testing of radiation levels.

c. Samples were also removed from wells of two nearby companies; samples from one of these wells were subjected to our tests as well as those of Argonne National Laboratories; samples from the other well were tested by the company owning the property.

d. The newly drilled wells are cased and will be maintained to allow future sampling.

Conclusions:

a. Initial testing by the two independent laboratories, as directed by the DOE, reveals no radiation levels above normal background. Long-term tests are in progress to assure that initial findings are totally valid.

b. Our testing, and that of our neighboring company, indicates no radiation levels above normal background.

c. No furtner action required at this time.

2. Examine test borings done on the property and share the data with the Department of Energy.

Actions:

a. Seven test boring samples, removed from various locations on the property during a two-year period from 1976-1978, were examined in our own facilities.

b. Results of these tests were supplied to the DOE.

Conclusions:

Tests on the boring samples showed no radiation above background level. No further action required.

3. Review all employee health records (Tonawanda Manhattan Project personnel).

Actions:

Employee records, including health records, to the extent that they exist, are being collected from our active files, our archives, and from the Federal government.

Conclusions:

Since the DOE has indicated its intent to review health records of all Manhattan Project employees, we have decided not to duplicate their work. We will use the health records only to supplement other records in compiling all necessary data for an epidemiology study.

4. Perform an epidemiology study.

Actions:

a. We have decided to conduct a mortality study that will analyze the mortality experience of the workforce over a 40-year period to determine whether any specific occupational health hazards can be identified. The data requirements and analytical procedures are being developed for this study.

b. Two external epidemiologists -- one from the University of Pittsburgh and the other from New York University -- have been engaged as independent consultants and have reviewed the research proposal for the study.

Conclusions:

The study will require that data on about 20,000 employees be collected, coded and tabulated before the evaluation phase can begin. Final results, therefore, will not be available until 1983, which is the normal time frame to complete a comprehensive study of this magnitude.

5. Assure that all employees (Niagara Frontier) associated with the Manhattan Project are informed that they were working with radioactive materials to which they may have been exposed.

Actions

From our records, we have identified the names (and corresponding social security numbers) of about 800 Tonawanda employees engaged in working on the Manhattan Project.

Conclusions:

Immediately following compilation of addresses from our records and government sources, notification will take place in the form of a letter addressed to each employee.

6. Continue to work with state and federal officials to determine what action is necessary regarding the ultimate disposition of the residual radioactivity from the former Ceramics Plant buildings and associated soils.

Action:

Much in the way of correspondence, telephone conversations and personal visits has taken place between our management at Tonawanda and the appropriate officials in the DOE, their FUSRAP (Formerly Utilized Sites Remedical Action Program) contractor and the State and local government.

Conclusions:

a. Representatiaves of FUSRAP will visit Tonawanda on May 18. The purpose of their visit is to quantify the remedial work necessary to remove previously identified low level radioactive soil and debris.

b. DOE officials will visit Tonawanda sometime later in May. The purpose of that visit will be to finalize plans for further investigative studies by DOE with respect to the residual effect of low level radioactive liquid waste disposal during the Manhattan Project. These studies are to be conducted on the site and in certain areas immediately surrounding the Tonawanda site.

c. We will make available to both teams as much of our resources as they require to successfully achieve their objectives.

R. J. Conkling

RJC:cmv

GROUND-WATER SAMPLES FROM LINDE SITE TONAWANDA NY

(ANALYSES BY ARGONNE NATIONAL LAB – MARCH, 1981)

pCi/ml

Data results received from G. Tuni of DOE on 4/10/81 CAT

SAMPLE NUMBER / WELL LOCATION (A-SUSPENDED SOLIDS, B-DISSOLVED SOLIDS)		CESIUM 137/ BARIUM 137	THORIUM (CHAIN) (ALPHA)	RADIUM 226	URANIUM	THORIUM 232	THORIUM 228	THORIUM 230
1 - LINDE GAS WELL SAMPLE EL. 55'-900'	A	4×10^{-10}	26×10^{-10}	132×10^{-8}	$.156 \times 10^{-6}$	724×10^{-10}	4.32×10^{-9}	3.19×10^{-9}
	B	21×10^{-9}	126×10^{-8}	168×10^{-8}	7.84×10^{-8}	$7 < 10^{-10}$	$< 7 \times 10^{-10}$	2.8×10^{-8}
2 - DUNLOP WELL	A	$< 711 \times 10^{-15}$	$< 142 \times 10^{-12}$	2.55×10^{-10}	3.31×10^{-11}	711×10^{-13}	4.74×10^{-12}	1.89×10^{-12}
	B	$< 6.17 \times 10^{-11}$	$< 123 \times 10^{-10}$	$< 411 \times 10^{-11}$	$< 2.87 \times 10^{-10}$	2.05×10^{-11}	$< 2.05 \times 10^{-11}$	8.23×10^{-11}
3 - LINDE MONITORING WELL 1 6'-8' WEST OF DISPOSAL WELL C SAMPLE EL. 64.5'	A	$< 133 \times 10^{-9}$	275×10^{-8}	354×10^{-8}	2.64×10^{-7}	2.22×10^{-8}	2.22×10^{-8}	2.22×10^{-9}
	B	135×10^{-9}	$< 254 \times 10^{-10}$	$< 8.45 \times 10^{-11}$	6.20×10^{-9}	5.07×10^{-10}	1.31×10^{-9}	4.23×10^{-11}
4 - LINDE MONITORING WELL 1 6'-8' WEST OF DISPOSAL WELL C SAMPLE EL. 89'	A	$< 999 \times 10^{-10}$	120×10^{-8}	143×10^{-8}	766×10^{-8}	6.66×10^{-9}	1.66×10^{-8}	9.9×10^{-9}
	B	8.98×10^{-10}	$< 5.39 \times 10^{-10}$	1.79×10^{-10}	465×10^{-9}	$< 8.99 \times 10^{-11}$	$< 8.99 \times 10^{-11}$	$< 8.99 \times 10^{-11}$
5 - LINDE MONITORING WELL 1 6'-8' WEST OF DISPOSAL WELL C SAMPLE EL. 114.'	A	$< 916 \times 10^{-10}$	643×10^{-9}	611×10^{-9}	6.41×10^{-8}	8.11×10^{-9}	8.64×10^{-9}	8.95×10^{-9}
	B	$< 385 \times 10^{-10}$	116×10^{-9}	514×10^{-11}	440×10^{-9}	8.99×10^{-11}	231×10^{-10}	180×10^{-10}
6 - LINDE MONITORING WELL 1 6'-8' WEST OF DISPOSAL WELL C SAMPLE EL 150'	A	$< 277 \times 10^{-11}$	555×10^{-11}	3.14×10^{-10}	113×10^{-8}	4.72×10^{-10}	509×10^{-10}	694×10^{-10}
	B	$< 3.82 \times 10^{-10}$	$< 765 \times 10^{-10}$	2.55×10^{-10}	3.65×10^{-9}	229×10^{-9}	344×10^{-10}	293×10^{-10}
7 - LINDE MONITORING WELL 2 BETWEEN DISPOSAL WELLS 1+2 SAMPLE EL 87'	A	$< 418 \times 10^{-10}$	1.17×10^{-8}	1.63×10^{-8}	1.22×10^{-7}	990×10^{-9}	961×10^{-9}	121×10^{-8}
	B	$< 436 \times 10^{-11}$	$< 878 \times 10^{-11}$	$< 290 \times 10^{-11}$	3.15×10^{-9}	174×10^{-11}	291×10^{-11}	436×10^{-11}
8 - LINDE MONITORING WELL 2 BETWEEN DISPOSAL WELLS 1+2 SAMPLE EL. 94'	A	$< 547 \times 10^{-10}$	188×10^{-8}	9.12×10^{-8}	354×10^{-5}	9.48×10^{-9}	7.87×10^{-9}	1.50×10^{-7}
	B	$< 6.08 \times 10^{-11}$	$< 122 \times 10^{-10}$	2.43×10^{-9}	193×10^{-9}	2.63×10^{-11}	263×10^{-11}	2.03×10^{-9}
9 - LINDE MONITORING WELL 2 BETWEEN DISPOSAL WELLS 1+2 SAMPLE EL 115.'	A	$< 932 \times 10^{-10}$	870×10^{-9}	410×10^{-9}	884×10^{-6}	1.62×10^{-8}	168×10^{-9}	5.59×10^{-7}
	B	455×10^{-10}	136×10^{-9}	114×10^{-9}	1.38×10^{-7}	5×10^{-11}	591×10^{-11}	227×10^{-9}
10 - LINDE MONITORING WELL 2 BETWEEN DISPOSAL WELLS 1+2 SAMPLE EL 150'	A	$< 78 \times 10^{-11}$	235×10^{-10}	125×10^{-8}	686×10^{-7}	143×10^{-9}	143×10^{-9}	28×10^{-7}
	B	$< 396 \times 10^{-11}$	$< 772 \times 10^{-11}$	138×10^{-9}	305×10^{-7}	296×10^{-11}	451×10^{-11}	386×10^{-9}
LIMITS FOR RADIATION PROTECTION - LIMITS FOR UNCONTROLLED AREA	(SOLUBLE)	2×10^{-5}	1×10^{-6} (2×10^{-4})*	3×10^{-8}	2×10^{-5} (4×10^{-5})*	2×10^{-5}	1×10^{-5}	2×10^{-6}
	(INSOLUBLE)	4×10^{-5}	1×10^{-5} (2×10^{-5})*	2×10^{-5}	2×10^{-5} (4×10^{-5})*	4×10^{-5}	1×10^{-5}	3×10^{-5}

CESIUM 137, THORIUM (CHAIN), AND RADIUM 226 DONE BY GAMMA SPECTROSCOPY
URANIUM DONE BY FLUOROMETRIC ANALYSIS
THORIUM 232, 228 AND 230 DONE BY ALPHA SPECTROSCOPY

* USE LIMITS IN PARENTHESIS